

Team Pediatrics

HPSN 2011

Nationwide Children's Hospital
Columbus, OH



Introductions

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Nationwide Children's Hospital

- Freestanding Pediatric Hospital
- Ohio State University Affiliated
- 410 Inpatient Beds
- Level 1 Trauma Center
- 90,000 ED visits
- 120,000 UC visits
- 19,000 surgery cases
- 8500 staff

Safety Culture

- “Zero Hero” initiative
- Eliminate Preventable Harm
- Use risk reducing behavioral tools in high risk environments

Z E R O H E R O--Create a Safe Day. Every Day.



Zero Hero Values

- **Everyone is committed to safety.**

Name Game - Know names

ARCC - Be wingman

STAR - Pay attention to detail

- **Everyone is accountable for communicating that commitment so that we can act as a team.**

SBAR

5P

- **We ensure what we are communicating is correct.**

Make sure it makes sense

Respect the “pinch”

NCH Simulation Center

- 6 Faculty
 - 1 Paramedic / Coordinator / Educator
 - 1 Nurse Administrative Manager
 - 2 Nurse Educators
 - 2 Physician Educators
 - Several physician and nurse educator facilitators
- Reporting structure through Medical Education Director, Chief Nurse Officer and Chief Medical Officer

In the beginning....



- We had a mannequin in a closet
- We did not have a space

Simulation Center Development



- We got our mannequin out of the box
- We got our space

Simulation Center Development



- We got our pediatric mannequin
- We got our pediatric space

We rolled out simulation hospital wide

Pediatric Interns, Residents, Fellows

- Orientation week for interns
 - NRP, PALS
 - Procedural Skills Day
 - Precept the Preceptor

Resident Competency Days

Goals for Residents:

- Defragment learning
 - Case-based sessions with real engagement
 - Apply knowledge, perform procedures and make decisions in parallel and under time pressure
- Learn what being in the hot-seat does to you
- Practice an anticipatory mindset
- Speak it
- Self-reflect during debrief and summarize to seal the deal



Resident Competency Days

Session themes

- **Stay organized**
 - reassess and re-manage ABC's as necessary
 - use ABC's as an anchor
- **Speak your thoughts**
 - Commitment to assessment and decisions
 - Succinctness
 - Sharing mental model
 - Revising with feedback or clinical changes
 - 5P case to PICU Fellow or Attending
 - or
 - SBAR consultant via phone
- **Case specifics**



Resident Competency Days

Case-based scenarios

- **Pediatric trauma**
- **Infant SVT**
- **Septic Shock**
- **Shaken Baby**



LAUNCH: “Learning and Understanding Nationwide Children’s Hospital”

- Centralized orientation program for newly hired nurses and respiratory therapists
- Goal of Simulation Session: basic interventions for infant in respiratory distress, practice using communication tools: SBAR and 5 P Handoff

“Take a Closer Look: The Deteriorating Child”

- **Goals of the session:**

- Rapid assessment & Recognition of deterioration
- Interventions: Airway management—positioning, suctioning, BVM ventilation
- Communication: Working as a team, calling an “SBAR” to a physician, communicating with ACT/CODE team, 5 P Handoff

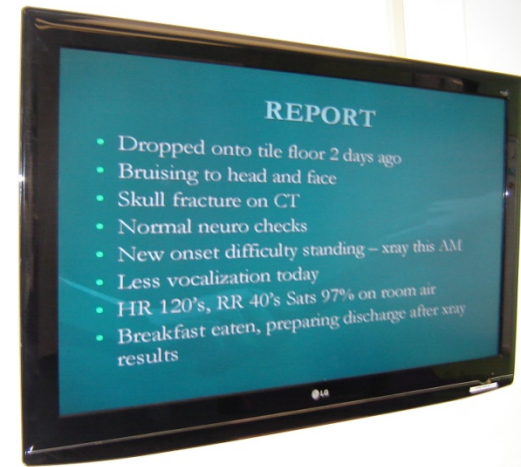
“Take a Closer Look: Diabetes”

- **Goals of the Session:**

- Integrate content from lectures earlier in the day
- Perform interventions for pediatric patient presenting with hypoxia and Diabetic Ketoacidosis: obtain history, IV fluid bolus, oxygen, obtain necessary blood work, start insulin drip
- Perform assessment: neuro checks—glucose level drops quickly and pt has decreasing LOC
- Program infusion pump for insulin drip

Surgery Fellows/Residents

- Initiated April 2009 as part of orientation process
- PGY-1 through Fellow level
- Objectives:
 - Evaluate surgical resident competency for ATLS-based assessment of injured child
 - Provide learning environment for skills required in emergency treatment of pediatric trauma patient
 - Define role expectations during trauma alerts
- Scenarios based on challenging patient cases and PI trends



ED Trauma Nurse Leaders

- Part of orientation to Trauma Nurse Leader role
- Objectives:
 - Practice assessment skills
 - Assess competency of skills required for care of critically injured pediatric patient
 - Enhance critical thinking skills

RN Competency Days

- 2009 - Introduced concept for using simulator during competency days
 - 2010 – Implementation
 - identified facilitators
 - developed teaching goals/objectives
 - designed scenarios specific to units
 - practice sessions with facilitators
 - rotate small groups of participants
- Sessions within competency/education days

Scenario development

- **Specific to participant groups**
- **Basis:**
 - **Performance improvement trends**
 - **Education about protocols/guidelines/equipment**
 - Fluid resuscitation (including rapid infuser)
 - Massive Transfusion Protocol
 - Cervical collars
 - Medication Administration
 - Airway management: suctioning, positioning, bag-valve mask ventilation

Scenario development (cont)

– Communication

- SBAR (situation, background, assessment, recommendation)
- 5 P Handoffs (patient, plan, purpose, problems, precautions)

– Recognition of critical patient status changes/activation of Assessment Consult Team (ACT)

RN Competency Days

- PICU
 - multisystem trauma patient with ETT dislodgement & shock requiring fluid MTP resuscitation
- Trauma/ Burn/Med Surg
 - abdominal trauma patient with septic shock
 - multisystem trauma patient with chest tube malfunction
 - scald burn with respiratory distress & fluid resuscitation
 - flame burn patient with compartment syndrome
- Neuroscience
 - hypovolemic shock
 - EDH with increased ICP



Burn Nurses

Fluid bolus

- Circulating blood volume of child =
 - **80 ml/kg**
- Crystalloid bolus =
 - **20 ml/kg**
- ***Remember -- 80/20.....***

RN Competency Days

- Offsite Urgent Care Centers
 - Respiratory failure--nurses and physicians practice airway management and interventions for emergency situations
- RN Float team
 - Infant shock scenario--recognition of shock, interventions for shock (oxygen, IV fluid bolus, antibiotics), a review of the “crash cart”, communication skills—ACT or Code Blue?, SBAR communication, 5 P Handoff

Evaluation of Program

- Nursing continuing education evaluations of “Take a Closer Look” courses include simulation
- “LAUNCH” orientation evaluation has questions about simulation sessions
- Simulation Evaluation completed following each session

Goals for the Future

- Outcome studies
 - Pre and post-tests being completed in “Take a Closer Look: Diabetes and Deteriorating Child” courses as well as follow up evaluations at 3 months being sent to participants
- Multi-disciplinary sessions

Website

[http://www.nationwidechildrens.org/gd/
applications/controller.cfm?
cid=700&type=2&catID=4&page=56](http://www.nationwidechildrens.org/gd/applications/controller.cfm?cid=700&type=2&catID=4&page=56)